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A COMPARISON OF MERGED VERSUS NON-MERGED BUSINESS ESTABLISHMENTS IN BRITAIN: WHAT CAN WE LEARN FROM THE WORKPLACE INDUSTRIAL RELATIONS SURVEY?

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A COMPARISON OF MERGED VERSUS NON-MERGED BUSINESS ESTABLISHMENTS IN BRITAIN: WHAT WE LEARN FROM THE WORKPLACE INDUSTRIAL RELATIONS SURVEY?

Abstract

The paper compares the structural characteristics, market conditions, organizational features, strategic behaviour and performance of merged versus unmerged private business establishments in the UK. The results are based on the analysis of the 1990 Workplace Industrial Relations Survey. The following conclusions are reached: merged establishments tend to be rather old, of small to medium size, more likely to involve manufacturing than services business, and to be part of conglomerate businesses. They are more likely to have an international market and to operate in oligopolistic markets. Nonetheless, they are perceived to operate in competitive conditions just as much as non-merged establishments. The merged manufacturing establishments are more likely to have been involved in restructuring strategies and to have cut jobs and achieved productivity gains. More merged establishments declare a below-average financial performance.

I. Introduction

Between 1986 and 1989, 5,204 mergers and acquisitions by industrial and commercial companies took place in the UK. The number of mergers and acquisitions averaged 1,301 a year, and the annual expenditure averaged £20,500 million. This was the largest merger wave in post-war Britain. In real terms, at 1962 stock-market prices, the annual expenditure on mergers and acquisitions in 1986-89 averaged £1,930 million, and was almost three times the £777 million recorded during the merger waves of 1967-73 and 1982-85.[1]

Many explanations have been supplied by economists as to why mergers occur, and as to which consequences they have on welfare; and much empirical work has been produced to analyse the performance of mergers, both in terms of their profitability, stock performance, and their effect on market concentration and market shares. Mergers can take place for a variety of reasons. To achieve economies of scale or scope; to discipline inefficient management (Jensen and Meckling, 1976); to divert free cash flow from shareholders (Jensen, 1986); to pursue growth in order to increase the managers' power (Marris, 1964); to respond to other mergers taking place in the market (Cantwell, 1992); to increase market power; or, in the case of transnational mergers, to gain a presence in a foreign market.

The wealth of explanations on the causes of mergers has been accompanied by much empirical work that for the UK unequivocally shows the following: (*a*) in the short to medium term (3 to 5 years) the performance of mergers in terms of profitability is disappointing; (*b*) among shareholders, only those holding shares

1 Source: Economic Trends Annual Supplement, National Income and Expenditure, Annual Abstract, Financial Statistics, *Business Monitor MQ7*, CSO *Business Bulletin*, Acquisitions and Mergers Within the UK.

of the target company gain from a merger; and (*c*) that mergers have a small but positive effect on market concentration.[2] Unfortunately, due to lack of suitable data, very little is known about the efficiency of mergers - apart that in the short-medium term the share of capital investment increases slightly post merger (Kumar, 1985) - although mergers prompted by profit-maximising considerations or by the need to discipline bad management should bring about measures aimed at cost reduction, and although the quest for efficiency is usually adduced by the merging partners as one of the main reasons for merging.

The issue of efficiency is a very important one in assessing the welfare implications of mergers (Williamson, 1968). Efficiency and synergy gains from mergers exert a negative pressure on price, while the reduction in the number of competitors (in horizontal mergers) or the increase in the number of multi-market contacts (in conglomerate mergers) exert a positive pressure on price (Kim and Singal, 1993). The overall welfare effect is given by the balance of this trade-off (Williamson, 1968). Evidence on whether merged companies are run more efficiently would shed some light on whether the *ex-ante* efficiency claims (at the proposal stage of the merger) are indeed realized *ex-post*.

Using establishment-level data from the 1990 UK Workplace Industrial Relations Survey (WIRS), this paper addresses - among others - the issue of the adoption of efficiency-enhancing measures at the workplace. The paper analyses the structural characteristics, performance and strategic behaviour of merged *versus* unmerged establishments as well as the market structure in which they operate.

[2] See Jensen and Ruback, 1983; Hughes, 1993; and Meschi, 1997 for surveys of the empirical works on mergers and acquisitions.

The WIRS[3] is an establishment-level survey containing a wealth of information on structural characteristics, and on many other economic aspects such as performance, market structure, companies' strategies and industrial relations. Although it has been widely used by labour and industrial relation economists, there has been no attempt, to our knowledge, to use the data in relation to the merger activity in which the establishments may have been involved. It is, in fact, possible to make use of such data because there is a specific question in the survey about whether the establishment has or has not been involved in mergers within the last three years, i.e. during the largest post-war merger wave of 1986-89. Those establishments which have not been involved in mergers can either be single establishments or part of a multi-establishment organisation. As will be specified below, all the data used in this paper relate to variables constructed from the answers to questions set to various managers in the establishments. Some of the questions are on factual information (such as age and size of the establishment). However, others are based on the respondents' judgement and discretion, such as the information on the financial performance of the establishment as compared to similar workplaces. This in itself gives a specifc and new angle to the variables and to the results of the survey compared to other results on merger activity.

The paper is developed by discussing - in section 2 - the data and the methodology used. This is followed by an analysis of structural characteristics (section 3); market conditions (section 4); organisation of production, product strategy and decision making (section 5); restructuring and strategies towards labour (section 6); and performance (section 7). The last section summarises and

[3] The WIRS has been conducted with financial support from the Employment Department, the Economic and Social Research Council (ESRC), the Policy Studies Institute, the Leverhulme Trust, and the Advisory, Conciliation, and Arbitration Service of the UK. There have, so far, been three surveys: in 1980, 1984, and 1990.

concludes. Finally we have three appendices. Appendix 1: sample selection procedures; Appendix 2: Description of variables; Appendix 3: results of independence tests.

II. Data and methodology

The data comes from the third wave of the Workplace Industrial Relations Survey (WIRS), which took place between January and September 1990. Interviews were conducted at 2061 public and private establishments engaged in either manufacturing or the provision of services[4] in England, Scotland and Wales. The sample, drawn from the latest available Census of Employment (the 1987 Census), was limited to workplaces employing 25 or more workers: although serious consideration was given to the possibility of including smaller establishments, the idea was discarded due to resource constraints (Millward, Stevens, Smart, and Hawes, 1992).

As it is customary in surveys of this kind, in order to make accurate comparisons between smaller and larger establishments, larger establishments were oversampled. This resulted in unequal probabilities of selection, with a larger probability attached to larger establishments. Moreover, the establishments to be included in WIRS 1990 were drawn from the 1987 Census of Employment, and if an establishment fell below the 25 employees threshold between 1987 and 1990 it was dropped from the sample, thus reducing the number of smaller establishments in the sample even further. Weights to correct for these

[4] The industrial coverage includes all the sectors defined in Divisions 1 to 9 of the 1980 Standard Industrial Classification, with the sole exception of deep coal mining.

undersampling problems were supplied with the data; and we have used them throughout our empirical work.

After the selection of the sample, interviews were conducted with managers on a wide variety of issues ranging from industrial relations to the introduction of change at the workplace; from market information to product information to other characteristics of the establishment and of its controlling company. Two questions in particular were of paramount importance to our analysis, as they allowed us to allocate establishments into three different categories for analysis; we selected only those establishments in which these questions were asked and answered. The first question asks whether the establishment is a single, independent establishment or it is part of a larger organization. The second question asks whether the establishment's owner ("ultimate controlling company") was the same three years ago, and if not how the change in ownership had come about.[5] On the basis of the answers to these questions we have created three samples: establishments that are part of a larger organization and have been the target of a successful merger during the last three years; establishments that are part of a larger organization and have not changed hands during the last three years; and single, independent establishments that, by definition, are unmerged.[6] After data cleaning and selection (summarized in Appendix 1), 673 observations remained, corresponding to a weighted sample of 914 workplaces. There are 83 (96 when weighted) merged establishments; 408 (467 when weighted) unmerged establishments; and 182 (351 when weighted) single establishments.

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5 The following alternatives are available as to the mode of ownership change: (*a*) friendly merger; (*b*) hostile takeover; (*c*) hive-off; (*d*) privatization; (*e*) senior management buyout; (*f*) employees' buyout; (*g*) other. If an establishment has been the object of a friendly merger or an hostile takeover, then we code it as "merged". Those establishments that have changed hands but have not been merged are dropped from the sample. Notice that our sample contains only one establishment that has been the object of an hostile takeover.

We considered all the variables available on the merged/unmerged sub-set and concentrated on those which are most relevant from the point of view of the economics of merger activity: they are presented into 24 groups of variables. For each establishment, we grouped the variables into: structural characteristics; market conditions; organization of production; product strategy; strategies towards labour; and performance. A detailed description of the variables used can be found in Appendix 2. In order to establish in which characteristics they differ significantly we compare merged establishments with unmerged ones. The unmerged ones can be multi or single establishments.

Before turning to the data analysis we point out that most of the questions asked in WIRS allow for categorical answers, giving rise to qualitative rather than quantitative variables. The data have therefore to be analyzed using frequency counts and contingency tables, with the row variable representing the merged/unmerged (or the merged/single) category, and the column variable representing various categories into which each of the variables mentioned above is divided. We have first tested whether the rows and columns of each contingency table are independent using Pearson's Likelihood ratio test, which under the null hypothesis and with the row variable divided into two categories, is distributed as a χ^2 with degrees of freedom equal to the number of categories

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[6] It should be pointed out that - given the nature of the data - the results presented in this paper do not give comparisons between the same establishments before and after merging, but between different establishments some of which have merged and some of which have not.

of the column variable minus one.[7] The test results for each variable are reported in Appendix 3, where a star denotes that the null hypothesis is rejected at the 10% level. Rejection of the null hypothesis implies that there is association between the merged status and the variable specified in the leftmost column.

Tables 1 to 6 list the percentages of merged, unmerged multi-establishments, and single establishment for each variable and category of interest grouped according to structural features (table 1); market conditions (table2); strategic behaviour (tables 3, 4 and 5); and performance (table 6). We test that the proportions between merged and unmerged, and merged and single, are the same for each category using the Kruksal-Wallis test of the null hypothesis that the mean scores are the same. Rejection of the null implies that the proportions are different across the samples.

III. Structural characteristics

The structural characteristics variables constructed from the survey relate to: size of the establishment, nationality of ownership, the location of the establishment within Britain, age of the establishment, sector in which the establishment operates (manufacturing *versus* services) and percentage of turnover covered by labour costs, which can be taken as a proxy for the labour intensity of production.

Table 1 gives the averages and the χ^2 for the relevant structural features variables. As regards size - variables group [1] - the proportions of merged and

[7] Assuming that the joint distribution of the counts of the contingency table is a multinomial distribution, Pearson's LR test is a test of the null hypothesis that the marginal probability that an observation falls in a certain cell (say cell *ij*, corresponding to the intersection of row *i* with column *j*) of the contingency table is equal to the row probability (i.e. the probability that it will be in row *i*) times the column probability (i.e. the probability that it will be in column *j*). If the null hypothesis cannot be rejected, then the rows and column are independent.

unmerged multi-establishments in each of the 6 size bands are not statistically different. There are instead significant differences in the size distribution of merged and (unmerged) single establishments. Single establishments tend to be smaller, with 71.9 per cent of them employing less than 50 employees *versus* 45.4 per cent of the merged ones; while merged establishments are more concentrated in the small to medium size bands, with 53.6 per cent of them employing between 50 to 499 employees *versus* 27.7 per cent of the single ones.

It is interesting to note that the vast majority of acquired establishments (93.4 per cent) is of small to medium size (between 25 and 199 employees); thus it seems that the probability of being acquired is very high for small to medium establishments, and very low for large establishments. Although our results appear to confirm the findings (based on accounting measures of profitability) that it is small establishments who are the targets of mergers[8] we have to be careful not to read into them more than they can say. As we will discuss later, more than half the establishments that have changed hands have also experienced a reduction in employment in the past 12 months, so they may have been moving from one size band to another as a result of the merger.

As regards the nationality of ownership of the establishment - variables [2], [3], [4] - a larger proportion of establishments that have been acquired through merger are owned by foreign companies: 17 per cent *versus* only 9.5 per cent of unmerged establishment. It is also interesting to note that 33 percent of foreign-owned merged establishments are younger than 10 years against 26 percent of UK-owned ones.[9] We cannot reject the hypothesis that the proportion of

8 See Hughes, 1993; and Meschi, 1997 for a survey of results.

9 These figures have been calculated by cross-tabulating the data. Result from further cross-tabulations involving various variables appearing in tables 1 to 6, the sector of activity and the regional distribution of merged versus unmerged establishments will be discussed throughout the text of the paper.

establishments owned by an EEC company is identical in the merged and unmerged samples. In contrast, such proportion differs significantly for US-owned establishments, which represent 6.8 and 2.9 per cent of the merged and unmerged samples respectively. In the run-up to the establishment of the Single Market, Japanese and US companies have increased their foreign direct investment (FDI) into the UK partly to secure access to European markets. Japanese FDI has taken more the form of 'greenfield' investment compared to US FDI (Thomsen and Woolcock, 1993). American companies have favoured mergers and acquisitions as a form of FDI since it gives quick access as well as enhanced market power.

Turning to the regional distribution within Britain - variables group [5] - we note that the results are statistically the same for merged, unmerged and single establishments, with the following three exceptions. First, while 9.5 percent of merged establishments are located in the East Midlands, the proportion of unmerged establishments (whether single or multi) in this region are much lower (4.6 and 3.0 percent respectively). Second, within our sample there have been no mergers in Wales. Third, the proportion of merged establishments in Scotland (4.4 percent) is lower than the proportion of unmerged ones (whether single - 11.9 percent - or part of a larger organisation - 11 percent).

Whatever the differences in the regional distribution among merged, unmerged, and single establishments, the regional distribution of merged establishments is of great interest *per sé*. The impact of a merger on regional employment and activity is a factor that has to be taken into account by the Monopoly and Merger Commission in its deliberations. In our sample, a quarter of all mergers have taken place in the South East. In this region, 22.6 percent of unmerged multi- and 21.2 percent of unmerged single establishment have laid off workers in the year before the survey took place; the percentage of merged establishments where employment was reduced is however much larger at 54.3 percent. This pattern is observed in all the other high-merger regions with the exception of Greater London,[10] namely the North (where 61.4 percent of merged establishments cut employment *versus* 12.2 percent of unmerged and 38 percent of single establishments), Yorkshire (where 65.3 percent of merged establishments cut employment *versus* 44 percent of unmerged and 35.7 percent of single establishments), and East Midlands (where 43.2 percent of merged establishments reduced employment *versus* 26.1 percent of unmerged and 27.4 percent of single establishments).[11] Thus high-merger regions are also regions where the share of unemployment created by merged establishments is higher, justifying the preoccupation of the merger authorities about the effect of mergers on the regional economy.

In terms of age of establishment - variables group [6] - although there are some significant differences when age is split into six categories, it is important to note that the proportions of establishments that have been at the current address for more (and less) than ten years are not statistically different across the three groups (68.3 percent for merged, 64.5 percent for unmerged, and 60.4 percent for single establishments), and the same can be said if we use the 20-years old cutting point. In other words, although almost 70% of merged establishments are rather old (older than ten years), there is no evidence that they are newer, or older, than the average.

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10 In Greater London, 26.4 percent of merged establishments cut jobs versus 36 percent of unmerged and 17.6 percent of single.

11 It is interesting to note that regions where employment reduction in merged establishments is highest do not always correspond to regions where the proportion of mergers in manufacturing is highest.

Variable [7] shows that while 40 percent of merged establishments operate in the manufacturing sector, only 20 percent of unmerged multi-establishments do so. The probability of observing a merged establishment in the manufacturing sector is 15 per cent, versus 8.8 per cent - almost half - in the services.[12] This result shows that merger activity was higher in the sector of the economy in which there was a need for modernization and restructuring and where there was excess capacity, low productivity and falling demand. As we discuss in sections 5 and 6, mergers played an important role in the restructuring process.

Finally, some information on the production methods of the establishments can be inferred from the variable group [8] which give results on questions related to the labour intensity of the production process. There are significant differences in the averages of merged *versus* unmerged establishments for the two middle bands of labour costs as a percentage of turnover. There is, on average, a higher percentage of merged against unmerged (51.6 and 38.1) in the lower middle band (25-49 percent of turnover is absorbed by labour costs). The upper-middle band (labour costs of 50-74 per cent of turnover) shows opposite values: a higher average for unmerged than for merged establishments (12.0 against 5.0). These results seem consistent with those of group [7] (manufacturing *versus* services) and indeed reinforce each other. Of the establishments with higher labour intensity, 84.7 percent are from services: both categories (services and high labour-intensity establishments) exhibit a lower probability of merger[13] than establishments which are within categories of manufacturing and with lower labour intensity of production.

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12 This pattern is not dissimilar to the one for merger activity in the world as a whole over the same period. Data in the UNCTAD-DTCI, 1996: Annex, table 9, p. 283 show that the tertiary sector outstripped the secondary one on merger activity in the years 1988-1990 by a factor of 1.05. However, the years 1993-1995 have seen a reversal with the secondary sector' merger activity at 88 percent of the one in the tertiary sector.

13 The probability of merger for high labour intensity establishments is 6.6 percent, a third of that of low labour-intensity ones (18.5 percent).

To summarise, the profile of the merged establishments in the three years preceding 1990 is the following. Merged establishments tend to be of small to medium size (between 25 and 199 employees) and rather old, although not older than the average. In a larger proportion of merged (6.8 percent) versus unmerged (2.9 percent) workplaces the parent company is from the US. Almost half of all acquired establishments are located in either the South East or Greater London. In the most targeted areas outside London and the South East (namely the North, Yorkshire, and the East Midlands) mergers have been accompanied by job cuts. Considerably more merged than unmerged establishments operate in manufacturing, where the probability of being taken over is almost double than in the services. This last result is consistent with the fact that those establishments with more labour-intensive processes appear to have lower probability of merger.

IV. Market conditions

The anti-competitive effects of mergers are of great concern to antitrust authorities worldwide and, in fact, the European Commission rulings on mergers are based on the creation or strengthening of a dominant position (Bensaid, 1994). Competition issues are also at the forefront in the decision making process of the UK Monopoly and Merger Commission (Fairburn, 1993).

There are however great difficulties in measuring the effects of mergers on competition; such difficulties start with the definition of the product market in which such effects have to be measured. The WIRS data have the advantage of supplying an estimate - given by the managers themselves - of the number of competitors existing in the market for the company's product. Moreover, information is supplied on the geographical characteristics of that market, i.e.

whether it is international, national or local. This information is particularly useful since it is at the product level; we therefore do not have to use industry proxies to appraise market competition.[14] Nonetheless, we must take account of the fact that all the answers are based on ‘perceptions’ by the managers themselves.

Table 2 presents results of variables related to market conditions. It shows that the distribution of merged and single establishments in terms of market location and competition is statistically the same. There are however differences between merged establishments and other establishments belonging to a larger organization, with proportionally more merged establishments operating in international (13.8 *versus* 7.8 percent) and oligopolistic markets than unmerged ones (36.9 *versus* 24.8 percent). These two sets of results are consistent with each other; oligopolistic markets tend to be or to become international.

It is interesting to note that almost 62 percent of merged establishments are declared by their managers to operate in competitive markets, and this proportion is not statistically different from those registered for both unmerged and single establishments. There does not seem to be an imbalance in the perceived market conditions in which the three categories of establishments operate. Moreover, among merged establishments, the proportion operating in competitive markets is the same in manufacturing (62 percent) and services (61.3 percent).

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[14] For a discussion of the benefits of using the WIRS "number of competitors" variable as a proxy for market power with respect to industry concentration ratios or market shares see Stewart, 1990. We also note that an alternative way of measuring competitiveness would be by using the elasticity of demand for the establishment's product. This information is available in WIRS, as managers are asked what would happen to the demand for their product if its price were increased by 5%, *ceteris paribus*. We included this variable into our analysis, as a dummy equal to one if the respondent stated that the demand would fall, and to zero otherwise. However, the elasticity dummy failed to pass the independence tests in both the merged versus unmerged ($^{2}_{\mathbf{1}}$=1.3) and the merged versus single ($^{2}_{\mathbf{1}}$=0.1) samples, and was therefore dropped from the analysis.

In conclusion, there does not appear to be any difference in the perceived degree of competition between merged and unmerged establishments. This results is compatible with a variety of scenarios. First, increase in market power is not tthe only or main objective of the merger. Second, there may be a gap between *ex-ante* objectives (e.g. increase in market power) and the ability of the company to achieve them *ex-post* (after the merger) or to achieve them within the three-years span considered in the survey. Third, the number of large companies/establishments competing may remain high (see the results related to oligopolistic structure) because the merger activity involves smaller establishments (see results related to variable [1] section 4). The competitive effects may then be felt more at the level of productive capacity in the industry than at the level of number of large players. Finally, there may be a discrepancy between reality and perceptions. Nonetheless, the fact that we have the same results for merged and unmerged establishments is of relevance in terms of both analysis and policy on mergers and competition.

V. Organisation of production, product strategy and decision making processes

The 1970s and 1980s have produced a vast amount of literature -well represented in Pitelis, 1993- on internalization and integration. Most of these writings find their theoretical underpinning in the transaction costs theory which goes back to the seminal paper by Coase, 1937 and the follow-up by Williamson, 1975 and 1981. The theoretical underpinning was also used in attempts to explain the drive towards internationalization by companies (Buckley and Casson, 1976).

The 1980 saw opposite moves by companies: towards out-sourcing and externalization of activities, particularly non-core ones. More recent evidence shows apparent contraddictions between a drive towards more internalization by private business operating in the manufacturing sector (O'Farrell, 1995) and public services engaged in sub-contracting strategies (Colling, 1995).

Our data -table 4- show a higher percentage of unmerged establishments declaring a more internalized structure (upstream integration). Thus companies/establishments involved in mergers are also likely to be among those following the externalization strategies prevalent in the 1980s. Whether this will continue in the 1990s is an interesting question which is worth following up at the next survey.

One issue connected to internalization/externalization is the one related to the effects on the local economy. If companies externalize they can get their supplies from local firms or from others, including international suppliers. For example Phelps, 1997 uses the linkages with local suppliers as a measure of the company's 'embeddedness' in the local economy. However, we do not know whether the establishments in the survey use local, national or international suppliers.

The results for variables [13] show that merged establishments have a lower propensity towards centralisation regarding all three types of decisions considered in the survey: appointment of senior managers, use of financial surplus and union recognition. In more than half the establishments, and for all three types of decisions, either the decision or the recommendation is made at the establishment level. When we look at the regional breakdown, however, we see that in the most peripheral regions (North, North-West, and Scotland) the percentage of merged establishments where the decision/recommendation on the appointment of senior managers or the use of financial surplus are made *in loco* is much lower than in other regions,[15] and in Yorkshire only 19 percent of the managers in merged establishments have a say in how the financial surplus is spent. This pattern cannot be looked upon as a very positive development from the perspective of local skill-nurturing: it could be considered as a negative sign of local embeddednss by the company/establishment.

These results on the decision-making processes are compatible with the results of products strategies by the establishments surveyed. Variable [14], table 4 shows that a larger proportion of recently acquired establishments are multi-product outlets than both unmerged and single ones. More importantly, merged establishments are much more likely to be part of conglomerates -as we can see from variable [15]. Also, the percentage of establishments belonging to purely horizontal (single) businesses is very much lower among merged (18 percent)

[15] The percentages of merged establishments where the decision/recommendation to [1] appoint a senior manager; [2] employ the financial surplus; and [3] (de)recognize a trade union are as follows. North: 51.2; 16.5; 85.8. North-West: 42; 0; 42. Yorks.: 75.5; 19; 61.4. West Midlands: 91; 98.5; 100; East Midlands: 79;

than among unmerged ones (36.9 percent). This result may be linked to the divisionalization of the managerial decision-making process within the organization (variables [13]). As conglomerate businesses are made up of totally unrelated parts, it is much more likely that decision-making within such businesses be decentralized, as the competences of managers are widely varied. A more decentralised decision making process in merged versus unmerged establishments, is therefore consistent with a larger proportion of merged establishment being part of conglomerates.

VI. Restructuring and strategies towards labour

As we have discussed in the introduction, one of the motivations frequently adduced for merger is the quest for efficiency gains. Efficiency can be achieved by adopting measures aimed at increasing labour productivity and the productivity of capital in the attempt to improve the financial performance of the establishment or the company.

As there is information in WIRS on which establishments have changed hands in the last three years, so there is information on whether productivity-enhancing measures have been adopted at the establishment during the last three years. This enables us to assess whether merged establishments show a tendency to be more efficiency-seeking than unmerged ones. We do not have evidence on whether these measures were taken before or after the merger; however, given the three-years time span of the question, it is likely that they refer to post-merger. Care has however to be exercised in interpreting the results.

63.6; 63.6. East Anglia: 100; 100; 28.2. South West: 82; 81.8; 80.6. South East: 51; 62; 23.7. Greater London: 100; 81.5; 95.2. Wales: no mergers. Scotland: 43; 52; 42.7.

The variables in table 5 refer to the adoption of specific strategies towards labour; they are all part of restructuring processes and most are efficiency-seeking. Information is available on whether in the last three years: (*a*) "the management has introduced changes in working practices that have reduced job demarcation or increased work flexibility" -variable [16]; (*b*) "there have been substantial changes in working practices or work organization" -variable [17]; or (*c*) "the management has made changes with the aim of increasing employees' involvement in the operation of the establishment" - variable [18]. A positive answer to any of these questions implies that productivity-enhancing measures, or measures aimed at cutting the wage bill, have been undertaken.

As we can see from the table, there is no evidence that the proportion of merged establishments involved in any of these restructuring strategies is any different from the proportion of unmerged establishments that are part of a larger organization. Restructuring has been undertaken in establishments within large organizations irrespective of whether they have been recently acquired or not. Also, it has to be noted that such restructuring has involved less than half the establishments and it has therefore been not very widespread. However, although there are no significant differences between merged and unmerged establishments, the proportion of establishments that introduced changes in work flexibility for manual workers is much higher in the manufacturing sector (42.8 percent of merged and 45 percent of unmerged) than in the services (27 and 29 percent for merged and unmerged); the same is true for the introduction of changes in working practices and work organization.

Looking at single establishments, for all the variables mentioned above there are substantial, and significant differences between the merged - and unmerged - establishments and the single ones. Thus it appears that larger organizations have been rationalising and streamlining their production processes much more than single, independent establishments. This is despite the fact that in larger organizations there are significantly more establishments where it is declared that the management is limited in its actions by the system of industrial relations in place[16] or by the lack of skills among the workforce.[17]

Where merged establishments differ from unmerged - and single - ones is with regards to unionization. Unions are recognised for pay bargaining in 44.5 percent of establishments belonging to larger organizations; in 33.7 percent of merged; and in only 19.3 percent of single workplaces. Although larger organizations seem to be acquiring fewer establishments with recognised unions, union recognition in merged establishments is far larger than in single ones. Moreover, it does not seem that the presence of trade unions hampers the restructuring process.

The information on capital investment and jobs - variable [17], - i.e. on whether in the last three years "new plant, machinery or equipment has being introduced so as to directly affect jobs or working practices" shows the following. The introduction of plants and machinery has taken place in a larger proportion (64.4 percent) of acquired establishments than of both unmerged (52.7 percent) and single (37.2 percent) ones, and the differences are significant. Thus in the short term the effects on jobs following the merger are likely to be due to the introduction of new capital. This result echoes the findings in Kumar, 1985 discussed in the introduction; and it can be taken as an indication that many

[16] The interviewed manager declared that “management is constrained” in 8.1 percent of the merged establishments; 14.9 percent of the unmerged; and only 2.5 percent of the single ones.

[17] The interviewed manager declared that “management is constrained” in 14 percent of the merged establishments; 15 percent of the unmerged; and only 5.4 percent of the single ones.

mergers do imply a great deal of restructuring and rationalization of the production processes. This is especially true in the manufacturing sector, where job losses due to new investment are declared by a staggering 88 percent of the merged establishment (*versus* 70 percent of the unmerged), *versus* 48 percent of the merged and unmerged establishments in the services.

VII. Performance

As we have seen in section 5, the adoption of restructuring and efficiency-enhancing strategies appears to be specific to large organizations as a whole; it does not appear to be just a post-merger occurrence. This is confirmed by the outcome in terms of labour productivity - variable [24] in table 6. The proportions of establishments recording higher, lower, or the same level of productivity as compared to three years ago are statistically not different between merged and unmerged establishments.[18] Productivity has grown in 83 percent of merged and 78 percent of unmerged establishments versus 54.4 percent of single establishments.

As fewer single establishments introduced restructuring and efficiency-enhancing strategies, so fewer of them reduced their workforce during the past calendar year (variable [24]). It is also interesting to note that considerably more merged than unmerged establishments reduced employment (44.1 *versus* 31.1 percent), and this difference is mainly due to the fact that the introduction of the new working methods (described in section 5) lead 26 percent of the merged establishments to cut employment, while only 10.5 percent of the unmerged ones

18 Apart from productivity growth, we laso have information on how the level of productivity at the establishment compares with similar workplaces. However, this variable failed to pass the independence test, meaning that productivity level and merger status are independent in our sample. We thus had to drop the variable from our analysis.

did so.[19] So we can say that in many cases mergers do lead to a rationalization in working methods and thus to productivity growth; and that these changes result in employment losses.

As rationalization was undertaken to a higher degree in manufacturing, and resulted in more losses among merged establishments, the worst hit by job cuts were recently acquired establishments in the manufacturing sector: 61.2 percent of which reduced jobs (versus only 38 percent of the unmerged ones). Correspondingly, the manufacturing sector experienced the largest productivity gains, and expecially so in merged establishments. The proportion of manufacturing establishments where productivity growth was the highest is 48 percent for the mergers sample and 29 percent for the unmerged and single samples, quite a significant difference. For the services, the proportions are 33.3, 36.1 and 22.3 percent for merged, unmerged and single establishments respectively.

There are other elements in the survey which are characteristic of the manufacturing sector. The results show that 58.1 percent of merged manufacturing establishments were operating below full capacity, versus 46 percent in the services. Moreover, 28 percent of merged manufacturing establishments experienced a fall in demand during the past year, versus 24 percent in the services. This situation shows some similarity with the one theorized by Dutz, 1989 who argues that in industries with falling demand and excess capacity, efficiency gains translate into welfare gains. However, we must

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19 From information on earnings dispersion available in WIRS, we can infer that these larger job losses in merged establishments are likely to be among the low paid, unskilled workforce. Looking at the percentage of workers earning half or less than half the average is lower in merged (46.1 percent) than unmerged establishments.

remember that the price paid in terms of employment in the UK and in the period under consideration was very high.

Over and beyond the manufacturing *versus* services dichotomy, we see that a significantly larger proportion of merged than unmerged establishments (10.9 *versus* 6 percent) is operating considerably below full capacity. This is consistent with the fact that more merged companies appear to operate in oligopolistic structures where a considerable degree of excess capacity is usually found (Cowling, 1982). Also, the proportion of merged establishments operating in declining sectors, i.e. facing a fall in demand (22 percent) is almost three times as large as that of unmerged establishments (8 percent), and these last results are somewhat echoed in the answers to questions on financial performance. The percentages of managers in unmerged multi-establishment that report performances a lot better and a little worse than in similar establishments are 29.5 and 4 percent respectively; in contrast the figures for merged establishments are 19.5 and 10 percent respectively.

Overall, fewer managers in merged than unmerged multi-establishments report a better than average financial performance (50versus 57 percent). This could be the result of within-the-organization difficulties and inefficiencies connected with the merger. While merged establishments apper to be under-performing compared to unmerged ones in multi-plant organizations, they perform better than single establishments, only 40 percent of which have a declared above-average performance. This could be a sign that underperforming establishments are more likely to be the object of a merger and the management is not able to turn the situation around completely, not within the three years considered in the survey. Nonetheless, we should take account of the fact that these results are consistent with - or indeed even better than - those usually found in the literature, where industry-adjusted estimates of accounting profitability show very disappointing results. Of course our results need to be taken with a pinch of salt, because they express the manager's perception of what the financial performance of similar establishments is, and managers may after all deceive themselves and/or the interviewers. However, the fact that 39 percent of the managers of merged establishments in manufacturing, and 57.6 percent in the services report a better-than-average performance cannot be ignored. This implies that although the highest level of restructuring and the highest productivity gains are recorded in manufacturing, the most profitable mergers are those involving establishments operating in the services. This points towards a conclusion that the overall financial performance of mergers -at least in the short run- is driven largely by the growth and dynamism of the sector/industry. The result is confirmed by the fact that the proportions of establishments recording above-average financial performance are almost identical in the services (57 and 58.4 percent for merged and unmerged multi-establishments), while merged multi-establishments do worse than unmerged ones in manufacturing (with proportions of 39 and 50.7 percent respactively).

VIII. Summary and conclusions

In this paper we compare the structural features, market conditions, organisation of production, strategic behaviour, and the performance of merged versus unmerged establishments in the UK. We have used establishment-level data on privately owned business establishments from the 1990 wave of the Workplace Industrial Relations Survey (WIRS). The (weighted) sample is representative of the population of establishments operating in mainland UK and employing 25 or more employees.

Our analysis leads to the following conclusions. Merged establishments tend to be rather old and of small to medium size (25 to 199 employees); about half of the mergers involve establishments located in Greater London or the South East; more merged establishments in peripheral regions have experienced job cuts; and the probability of observing a merger in manufacturing is, at 15 percent, almost double than in the services. As to market conditions, 62 percent of merged establishments are perceived by managers to operate in competitive markets, a proportion not statistically different from unmerged workplaces. Moreover, the probability of having an international product market is higher for merged establishments; so is the probability of operating in oligopolistic markets.

It does not appear that vertical integration is higher among merged establishments; rather the contrary. However, merged establishments are more diversified than unmerged ones. Proportionately more merged establishments are multi-product outlets, and are parts of conglomerate businesses. Conglomerate acquisitions represented 34 percent of all mergers during the 1986-89 merger wave - according to our sample - while purely horizontal mergers made up only 18 percent of the total. As conglomerate mergers were a good proportion of the total, so the percentage of establishments where important decision-making takes place *in loco* is higher in the merged than in the unmerged sample. There is however one important qualification to be made here, and it is that in the peripheral regions of Scotland, the North and North-West the incidence of *local* decision making is substantially lower.

As regards the introduction of restructuring strategies (through the introduction of new working practices and capital endowement), it appears that the most pro-active sample was the one of merged establishments operating in manufacturing. Consistently with this, a good 48 per cent of manufacturing establishments experience "very high" productivity growth. Of course the other side of the coin is that more manufacturing than service outlets cut jobs, and more so if they had recently been merged. Moreover, the proportion of establishments operating at full capacity and facing rising product demand is lower in the manufacturing sector than in services. One possible overall conclusion from these results is that in industries characterized by low demand and excess capacity, liquid capital is used to buy up existing companies/establishment in view of rationalisation and modernisation and reduction in capacity.

Finally, as regards the performance of mergers, our data show that -compared to similar workplaces- more merged than unmerged establishments have below-average financial performance up to three years after merger. This is particularly true in the manufacturing sector. However, the fact that 39 percent of managers of merged establishments in manufacturing and 57.6 percent in services declared above average financial performance indicates a better level of performance in merged establishments than usually found in the literature. However, one must interpret these results with care due to two specific circumstances. First, the answers are in the nature of perceptions by the managers themselves. Second, our overall results should not be interpreted as comparisons between pre- and post-merger characteristics of the same establishments but as comparisons between characteristics of different establishments some of which have undergone merger and some have not.

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